

PATENT COOPERATION TREATY


PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 11 NOV 2005

Applicant's or agent's file reference RRH/LAH/PJ.19		FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/GB2004/003162		International filing date (day/month/year) 20.07.2004	Priority date (day/month/year) 24.07.2003	
International Patent Classification (IPC) or national classification and IPC F42D5/045, E04H15/20				
Applicant CINTEC INTERNATIONAL LIMITED et al.				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 7 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau) a total of 3 sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 01.03.2005		Date of completion of this report 10.11.2005		
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465		Authorized Officer Stefanescu, R Telephone No. +49 89 2399-2475		



INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/GB2004/003162

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

1-6 as originally filed

Claims, Numbers

1-12 received on 21.05.2005 with letter of 19.05.2005

Drawings, Sheets

1/2, 2/2 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
 4. ☒ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages
 - ☒ the claims, Nos. 10
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/GB2004/003162

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:
- ☐ the entire international application,
 - ☒ claims Nos. 12
- because:
- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):
 - ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
 - ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
 - ☒ no international search report has been established for the said claims Nos. 12
 - ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
 - the written form ☐ has not been furnished
 - ☐ does not comply with the standard
 - the computer readable form ☐ has not been furnished
 - ☐ does not comply with the standard
 - ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
 - ☐ See separate sheet for further details

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/GB2004/003162

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-11
	No: Claims	
Inventive step (IS)	Yes: Claims	1-11
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-11
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/GB2004/003162

Re Item I

Basis of the report

1. The amendment in claim **10** filed with the letter dated 19.05.2005 introduces subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT. The amendment concerned is the following:

the replacement of the expression "Velcro®" with "releasably interconnectable".

No basis for such a replacement has been provided by the Applicant nor can be found in the application as filed and the application results as being amended in such a way that it contains subject-matter which extends beyond the content of the application as filed, contrary to Article 34(2)(b) PCT.

2. In accordance with Rule 70.2c) PCT the present report is therefore established as if these amendments introduced together with the letter of 19.05.2005, have not been made.

Re Item III

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

Dependent claim **12** does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. Moreover this claim attempts to define the subject-matter with references to the drawings without mentioning any technical features, contrary to the Rule 6.2 PCT.

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

D1: WO 95/08749 A (PARKES JOHN HUMPHRIES ; SALTER STEPHEN HUGH (GB)) 30 March 1995 (1995-03-30)

2. The document **D**, is regarded as being the closest prior art to the subject-matter of claim **1**, and shows (see D1, especially page 13, line 18 to page 20, line 8 and fig. 1-8) a shock suppression apparatus, which comprises the features of the preamble (line 1 to 5) of the independent claim **1**.

The difference from the apparatus described in **D1** consists in that:

the support cushion means, i.e. the base (24) with the base element (25), is located **below** the walled containers, i.e the walls (26,27,28), acting as a support for these walled containers in their erected position (see D1, especially fig.6-8).

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/GB2004/003162

Consequently, **the subject matter of claim 1 is new** (Art.33(2) PCT).

3. The **problem** to be solved by the present application is to find a way to *better support the walled containers against collapse*

The **solutions** as proposed by the claim 1 (line 6 to 8) provides that the inflatable support cushion means is disposed **between** the walled containers therefore supporting these containers, which are filled with water, from inward collapse.

Consequently, **the subject matter of claim 1 is inventive** (Art.33(3) PCT).

4. Claims **2-11** are dependent on claim 1 and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Remarks:

1) **Clarity (Article 6 PCT)**

- a) The expression used in claim 1, i.e. "*...to at least partially support the walls thereof against collapse...*" is vague and unclear and leaves the reader in doubt as to the meaning of the technical features to which it refers, thereby rendering the definition of the subject-matter of said claim unclear.
In order to remove this objection the said expression should have been formulated e.g. as follows: "*...supporting the walls thereof against collapse...*"
- b) For the sake of clarity the expression "without departing from the ***spirit*** or scope of the invention" from the last paragraph, page 6, lines 24-25 of the description should have been replaced with an expression e.g. as follows: "without departing from the scope of the invention as defined by the following claims".

2) **Formal Aspects**

- a) To meet the requirements of Rule 6.3(b) PCT, the independent claim 1 should have been properly cast in the **two part form**, with those features which in combination are part of the prior art being placed in the preamble (see document **D1**).
- b) To meet the requirements of Rule 5.1(a)(ii) PCT, document **D1** should have been also identified in the description and the relevant background art disclosed therein should have been briefly discussed.

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/GB2004/003162

- c) The **description** should have been brought into conformity with the claims (Rule 5.1(a)(iii) PCT).

3

or a mixture of both which may contain e.g. a fire retardant/suppressant or some other material which may be released following an explosion or collision event.

12. ~~Shock suppression apparatus substantially as hereinbefore described~~
with reference to the drawings.

5

Claims

5 1. Shock suppression apparatus for suppressing the effects of an explosion or collision, the apparatus comprising a pair of inflatable spaced-apart walled containers "(1, 2)" connected or connectable at respective upper ends to each other, either directly or indirectly, and connected or connectable at their respective lower ends to each other, either directly or indirectly, and inflatable support cushion means "(5)" disposed between the walled containers to at least partially support the walls thereof against collapse when such are filled with water.

10

2. Shock suppression apparatus according to Claim 1 further characterised in that the upper ends of the walled containers are connected together by webbing or strapping "(3)" and the lower ends are splayed apart and connected to an inflatable base "(4)" to form in combination therewith a structure of generally triangular section when inflated.

15

3. Shock suppression apparatus according to Claim 1 or Claim 2 further characterised in that the support means "(5)" is partially or wholly of triangular section.

4. Shock suppression apparatus according to any preceding claim further characterised in that the walls of the walled containers "(1, 2, 4)" are interconnected by drop stitches so as to prevent or inhibit outward bulging thereof in response to the weight of water contained therein.

20

5. Shock suppression apparatus according to any preceding claim further characterised in that each walled container "(1, 2, 4)" is comprised of a number

of individual segments or cells which thereby minimise the tendency of each segment or cell to jeopardise the overall required shape of the walled containers by collapsing under the weight of water.

5 6. Shock suppression apparatus according to any preceding claim further characterised in that the internal walls of the walled containers "(1, 2, 4)" are interconnected by straps at strategic locations.

7. Shock suppression apparatus according to Claim 6 further characterised in that the internal walls are interconnected by straps which are heat-welded in place.

10 8. Shock suppression apparatus according to any preceding claim further characterised in that the walled containers "(1, 2)" overlap with each other in a stepped or staggered formation such that adjoining ones of each apparatus may be interlinked to form a continuous wall of such structures.

15 9. Shock suppression apparatus according to Claim 8 further characterised in that the containers are interlinked with each other along the line of the wall by support webbing/strapping "(3)".

20 10. Shock suppression apparatus according to Claim 8 or Claim 9 further characterised in that the containers are interlinked through the use of strips of releasably interconnectable webbing or strapping "(3)" stitched to each one and adapted to releasably interconnect with adjacent ones of such support structures.

11. Shock suppression apparatus according to any preceding claim further characterised in that the support means "(5)" is adapted to contain air or liquid